#7   1638

RAW SEQUENCE LISTING   DATE: 06/06/2001
PATENT APPLICATION: US/09/453,387   TIME: 14:02:04

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Output Set: C:\CRF3\06062001\I453387.raw

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 3 <110> APPLICANT: Wilkins, Thea A.
 4        The Regents of the University of California
 6 <120> TITLE OF INVENTION: Cotton Transcription Factors and Their Uses
 8 <130> FILE REFERENCE: 023070-095600US
10 <140> CURRENT APPLICATION NUMBER: US 09/453,387
11 <141> CURRENT FILING DATE: 1999-12-02
13 <160> NUMBER OF SEQ ID NOS: 26
15 <170> SOFTWARE: PatentIn Ver. 2.1
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 1006
19 <212> TYPE: DNA
20 <213> ORGANISM: Gossypium hirsutum
22 <220> FEATURE:
23 <221> NAME/KEY: CDS
24 <222> LOCATION: (59)..(943)
25 <223> OTHER INFORMATION: GhMYB1
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31 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
32  1               5                  10                  15
34 tgg acc aaa gag gaa gat caa cgc ctc atc aac tac atc cgt gtc cat     154
35 Trp Thr Lys Glu Glu Asp Gln Arg Leu Ile Asn Tyr Ile Arg Val His
36              20                  25                  30
38 ggt gaa ggc tgc tgg cgt tcc ctc ccc aaa gct gct ggg ctg ctt aga     202
39 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
40          35          .          40                  45
42 tgt ggt aag agt tgc aga tta aga tgg ata aac tac ttg agg cct gat     250
43 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
44      50                  55                  60
46 ctt aag aga gga aat ttc act gaa gaa gaa gat gag ctt atc atc aag     298
47 Leu Lys Arg Gly Asn Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys
48  65                  70                  75                  80
50 ctt cac agt tta ctt gga aac aaa tgg tca ttg att gct gga aga tta     346
51 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
52              85                  90                  95
54 cca gga aga aca gat aat gag ata aag aac tac tgg aac aca cac atc     394
55 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
56              100                 105                 110
58 aaa aga aag ctt ata agc aga gga att gat cca caa act cat cgt cct     442
59 Lys Arg Lys Leu Ile Ser Arg Gly Ile Asp Pro Gln Thr His Arg Pro
60          115                 120                 125
62 ctc aat caa acg gcc aat acc aac aca gtc aca gcc ccc acc gaa ttg     490
63 Leu Asn Gln Thr Ala Asn Thr Asn Thr Val Thr Ala Pro Thr Glu Leu
64      130                 135                 140
66 gat ttc aga aac tcg ccc aca tcc gtt tcc aaa tcc agt tcc atc aaa     538
67 Asp Phe Arg Asn Ser Pro Thr Ser Val Ser Lys Ser Ser Ser Ile Lys
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Input Set : A:\Uco-956.app
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 70 aac ccg tct ctg gat ttc aat tac aat gaa ttt caa ttc aag tcc aac    586
 71 Asn Pro Ser Leu Asp Phe Asn Tyr Asn Glu Phe Gln Phe Lys Ser Asn
 72                    165              170                    175
 74 aca gat tcc ctt gaa gaa ccc aac tgt aca gcc agc agt ggc atg act    634
 75 Thr Asp Ser Leu Glu Glu Pro Asn Cys Thr Ala Ser Ser Gly Met Thr
 76              180              185                    190
 78 aca gat gaa gag caa caa gaa cag ctg cac aag aag cag caa tac ggt    682
 79 Thr Asp Glu Glu Gln Gln Glu Gln Leu His Lys Lys Gln Gln Tyr Gly
 80              195              200                    205
 82 ccg agc aat ggg caa gac ata aat ttg gag ctg tcg att ggg att gtt    730
 83 Pro Ser Asn Gly Gln Asp Ile Asn Leu Glu Leu Ser Ile Gly Ile Val
 84       210              215              220
 86 tca gct gac tca tct cgg gta tca aat gcc aac tcg gcc gag tcg aaa    778
 87 Ser Ala Asp Ser Ser Arg Val Ser Asn Ala Asn Ser Ala Glu Ser Lys
 88 225                    230              235                    240
 90 cca aag gta gat aac aac aat ttc cag ttt ctt gaa caa gct atg gtg    826
 91 Pro Lys Val Asp Asn Asn Asn Phe Gln Phe Leu Glu Gln Ala Met Val
 92                    245              250                    255
 94 gct aag gcg gta tgt ttg tgt tgg caa tta ggt ttt gga aca agt gaa    874
 95 Ala Lys Ala Val Cys Leu Cys Trp Gln Leu Gly Phe Gly Thr Ser Glu
 96              260              265                    270
 98 att tgt agg aac tgt caa aat tca aat tca aat ggc ttc tat agt tat    922
 99 Ile Cys Arg Asn Cys Gln Asn Ser Asn Ser Asn Gly Phe Tyr Ser Tyr
100           275              280              285
102 tgt aga ccc ttg gat tca tag ggtcatcttt ttcttctttc tttctgtttt    973
103 Cys Arg Pro Leu Asp Ser
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111 <212> TYPE: PRT
112 <213> ORGANISM: Gossypium hirsutum
114 <400> SEQUENCE: 2
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118              20                 25                    30
119 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
120              35                 40                    45
121 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
122      50                 55                 60
123 Leu Lys Arg Gly Asn Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys
124  65                 70                 75                    80
125 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
126              85                 90                    95
127 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
128              100              105                    110
129 Lys Arg Lys Leu Ile Ser Arg Gly Ile Asp Pro Gln Thr His Arg Pro
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131 Leu Asn Gln Thr Ala Asn Thr Asn Thr Val Thr Ala Pro Thr Glu Leu
132     130                135                140
133 Asp Phe Arg Asn Ser Pro Thr Ser Val Ser Lys Ser Ser Ser Ile Lys
134 145                150                155                160
135 Asn Pro Ser Leu Asp Phe Asn Tyr Asn Glu Phe Gln Phe Lys Ser Asn
136                165                170                175
137 Thr Asp Ser Leu Glu Glu Pro Asn Cys Thr Ala Ser Ser Gly Met Thr
138                180                185                190
139 Thr Asp Glu Glu Gln Gln Glu Gln Leu His Lys Lys Gln Gln Tyr Gly
140          195                200                205
141 Pro Ser Asn Gly Gln Asp Ile Asn Leu Glu Leu Ser Ile Gly Ile Val
142     210                215                220
143 Ser Ala Asp Ser Ser Arg Val Ser Asn Ala Asn Ser Ala Glu Ser Lys
144 225                230                235                240
145 Pro Lys Val Asp Asn Asn Asn Phe Gln Phe Leu Glu Gln Ala Met Val
146                245                250                255
147 Ala Lys Ala Val Cys Leu Cys Trp Gln Leu Gly Phe Gly Thr Ser Glu
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159 <213> ORGANISM: Gossypium hirsutum
161 <220> FEATURE:
162 <221> NAME/KEY: CDS
163 <222> LOCATION: (72)..(752)
164 <223> OTHER INFORMATION: GhMYB6
166 <400> SEQUENCE: 3
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169 ttgaaactcc g atg aga aaa cct tgc tgc gat aaa caa ggc acc aac aag  110
170             Met Arg Lys Pro Cys Cys Asp Lys Gln Gly Thr Asn Lys
171              1           5                10
173 gga gcc tgg tcc aag caa gaa gat caa aag ctc att gat tat ata cgt   158
174 Gly Ala Trp Ser Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Arg
175     15                20                25
177 att cat ggt gaa ggc tgt tgg cgt tcc ctc ccc aaa gct gca ggt ttg   206
178 Ile His Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu
179 30                35                40                45
181 cac cgt tgc ggt aaa agt tgc agg ctg aga tgg ata aat tac tta aga   254
182 His Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg
183                50                55                60
185 cca gat atc aaa cgt ggt aac ttt gct caa gac gaa gag gac tta att   302
186 Pro Asp Ile Lys Arg Gly Asn Phe Ala Gln Asp Glu Glu Asp Leu Ile
187          65                70                75
189 atc aaa ctc cat gct ctc ctt ggt aac cgg tgg tca ctg ata gct ggt   350
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190 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
191         80                  85                  90
193 aga tta cca gga aga aca gat aat gaa gtg aag aac tat tgg aat tcc     398
194 Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser
195     95                  100                 105
197 cat ata aag aga aag cta atg aag atg ggg atc gat cct aat aac cat     446
198 His Ile Lys Arg Lys Leu Met Lys Met Gly Ile Asp Pro Asn Asn His
199 110                 115                 120                 125
201 aag ttg aac caa tat cct cat cat gtt ggt ccc ctt aac ccc acc acc     494
202 Lys Leu Asn Gln Tyr Pro His His Val Gly Pro Leu Asn Pro Thr Thr
203                 130                 135                 140
205 acc aac tcc atg gat gtg gca tgt aag ctt aga gtg tgt tca aca gac     542
206 Thr Asn Ser Met Asp Val Ala Cys Lys Leu Arg Val Cys Ser Thr Asp
207             145                 150                 155
209 aat gat gat ggg atc tca gat gct gca agt tat ctc gaa gac gca aca     590
210 Asn Asp Asp Gly Ile Ser Asp Ala Ala Ser Tyr Leu Glu Asp Ala Thr
211         160                 165                 170
213 ccg ccc act ggt ata tcc aac ttg gac ctt gat ctc aca att gct ttt     638
214 Pro Pro Thr Gly Ile Ser Asn Leu Asp Leu Asp Leu Thr Ile Ala Phe
215     175                 180                 185
217 cct tcg agt cct atc aag aat att att gaa gaa agc cag cag aaa aca     686
218 Pro Ser Ser Pro Ile Lys Asn Ile Ile Glu Glu Ser Gln Gln Lys Thr
219 190                 195                 200                 205
221 gca tct att gta aca aat gat gaa gaa gaa caa tat aca gtc cct acc     734
222 Ala Ser Ile Val Thr Asn Asp Glu Glu Glu Gln Tyr Thr Val Pro Thr
223                 210                 215                 220
225 ctt ctt ctt ttc aga tga gacaaaaaaa aaagcctcac acatgtggag           782
226 Leu Leu Leu Phe Arg
227             225
229 attcgtgcaa aagacctaaa ggcttacgaa ggcaacatgc acgccattgt caaattcttt 842
231 tggatgatgg attgaaacca tatccttgtc cattagaaag gaggaagata agctaaaact 902
233 gtattattgt gtataaattt ggtagaaaga aagatttcaa cttaagaatt aggatcaaat 962
235 aactgaatga atgaacgaat tgcagataag ttgttaggag gttttcaatc aacttatctg 1022
237 caattaattt ggtggagctg atgtaggatg atgagttcat cgtacatgaa ctgaaccttt 1082
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245 <211> LENGTH: 226
246 <212> TYPE: PRT
247 <213> ORGANISM: Gossypium hirsutum
249 <400> SEQUENCE: 4
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253             20                  25                  30
254 Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu His Arg Cys
255         35                  40                  45
256 Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Ile
257     50                  55                  60
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PATENT APPLICATION: US/09/453,387   TIME: 14:02:04

Input Set : A:\Uco-956.app
Output Set: C:\CRF3\06062001\I453387.raw

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258 Lys Arg Gly Asn Phe Ala Gln Asp Glu Glu Asp Leu Ile Ile Lys Leu
259  65                  70                  75                  80
260 His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro
261              85                  90                  95
262 Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser His Ile Lys
263             100                 105                 110
264 Arg Lys Leu Met Lys Met Gly Ile Asp Pro Asn Asn His Lys Leu Asn
265         115                 120                 125
266 Gln Tyr Pro His His Val Gly Pro Leu Asn Pro Thr Thr Thr Asn Ser
267     130                 135                 140
268 Met Asp Val Ala Cys Lys Leu Arg Val Cys Ser Thr Asp Asn Asp Asp
269 145                 150                 155                 160
270 Gly Ile Ser Asp Ala Ala Ser Tyr Leu Glu Asp Ala Thr Pro Pro Thr
271             165                 170                 175
272 Gly Ile Ser Asn Leu Asp Leu Asp Leu Thr Ile Ala Phe Pro Ser Ser
273             180                 185                 190
274 Pro Ile Lys Asn Ile Ile Glu Glu Ser Gln Gln Lys Thr Ala Ser Ile
275         195                 200                 205
276 Val Thr Asn Asp Glu Glu Glu Gln Tyr Thr Val Pro Thr Leu Leu Leu
277     210                 215                 220
278 Phe Arg
279 225
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283 <210> SEQ ID NO: 5
284 <211> LENGTH: 1081
285 <212> TYPE: DNA
286 <213> ORGANISM: Gossypium hirsutum
288 <220> FEATURE:
289 <221> NAME/KEY: CDS
290 <222> LOCATION: (86)..(994)
291 <223> OTHER INFORMATION: GhMYB7
293 <400> SEQUENCE: 5

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297                            Met Gly Arg Ser Pro Cys Cys Ser Lys
298                             1                   5
300 gaa ggc ctt aac aga gga gct tgg act gct ctt gaa gac aaa att ctt    160
301 Glu Gly Leu Asn Arg Gly Ala Trp Thr Ala Leu Glu Asp Lys Ile Leu
302  10                  15                  20                  25
304 aaa gat tat atc aaa gta cac ggt gaa ggt cgt tgg aga aat ctc ccc    208
305 Lys Asp Tyr Ile Lys Val His Gly Glu Gly Arg Trp Arg Asn Leu Pro
306             30                  35                  40
308 aaa aga gct ggt ctt aag aga tgt ggg aaa agt tgt agg ctt cgg tgg    256
309 Lys Arg Ala Gly Leu Lys Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
310             45                  50                  55
312 ttg aat tat ttg aga cct gat att aaa aga ggt aac ata tca cct gac    304
313 Leu Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Asn Ile Ser Pro Asp
314             60                  65                  70
316 gag gaa gag ctt atc atc aaa ctc cac aaa ctc ttg gga aac aga tgg    352
317 Glu Glu Glu Leu Ile Ile Lys Leu His Lys Leu Leu Gly Asn Arg Trp
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VERIFICATION SUMMARY   DATE: 06/06/2001
PATENT APPLICATION: **US/09/453,387**   TIME: 14:02:05

Input Set : **A:\Uco-956.app**
Output Set: **C:\CRF3\06062001\I453387.raw**

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L:575 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:593 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:798 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:827 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26